Communicable Diseases Weekly Report

Week 40, 3 October to 9 October 2016

In summary, we report:

- Commencement of Australian Immunisation Register and Zostavax® on the National Immunisation Program
- Meningococcal Disease – 2 new cases
- Q-fever – 162 cases so far this year
- Summary of notifiable conditions activity in NSW

For further information on infectious diseases on-line see NSW Health Infectious Diseases.

Also see NSW Health Infectious Diseases Reports for links to other surveillance reports.

Commencement of the Australian Immunisation Register

Commencing 1 October 2016, the Australian Childhood Immunisation Register (ACIR) has expanded to become the Australian Immunisation Register (AIR). The AIR is a national register that records vaccinations given to people of all ages in Australia.

The AIR records vaccinations given through general practices, Aboriginal Medical Services and community clinics.

Vaccinations given after 30 September 2016 can be recorded by vaccination providers. This includes National Immunisation Program vaccinations and privately funded vaccinations, except for Q fever which is recorded on a separate existing national register.

Currently AIR does not record vaccinations provided through school vaccination programs or in hospitals. From the beginning of the 2017 school year, the National HPV Register will be able to record human papilloma virus (HPV) as well as the other vaccinations given as part of school vaccination programs: chicken pox (varicella); and diphtheria, tetanus and whopping cough (pertussis). There is an intention to expand reporting to the AIR overtime to include school program vaccines.

The shingles vaccine, Zostavax®, has been placed on the National Immunisation Program (NIP), to be provided free of charge from 1 November 2016 to people aged 70 years. There will also be a five year catch-up program for people aged 71 – 79 years. The vaccine is also recommended but not funded for people 60 – 69 years of age. Those who are not eligible under the program can purchase it on the private market.

Shingles is a painful rash caused by the herpes zoster virus – the same virus that causes chickenpox. The shingles rash occurs when the dormant chickenpox virus is reactivated in the nerve tissues, causing inflammation of the nerves. One in three people will develop shingles in their lifetime.

Zostavax® recommendations have been updated in the online version of the Australian Immunisation Handbook 10th edition available at www.immunise.health.gov.au.

Meningococcal Disease

Two cases of meningococcal disease were reported this week (Table 1). No connection between the cases was identified and they occurred in different local health districts. The cases occurred in the 15 – 19 and 55 – 59 years age groups. One case has been typed as serogroup B and typing for the other case is pending.

A total of 62 cases of meningococcal disease have been reported so far in 2016, including four fatal infections. In the same period of 2015 there were 36 cases notified with two deaths. Cases of meningococcal disease in 2016 have occurred in both adults and children with an age range of 0 to 88 years. The number of meningococcal disease notifications in 2016 has increased compared to 2015 however they are still within the historical range of notifications in NSW.

Meningococcal disease is caused by infection with the bacterium *Neisseria meningitidis*. The bacteria are spread through direct contact of mucous membranes with the organism, such as exposure to respiratory droplets from the nose and throat of an infected person.

Close contact may result in the bacteria colonising the throat of the exposed person but in most people this does not cause any disease. In only a very small proportion of people the bacteria may invade from the throat to other parts of the body, causing invasive meningococcal disease (IMD).

IMD typically involves meningitis (infection of the lining of the brain), septicaemia (infection of the blood) or both. Up to 10 per cent of IMD infections are fatal even with appropriate antibiotic treatment, and survivors may be left with long-term complications.

There are several serogroups of *Neisseria meningitidis* which can cause invasive disease. The most common serogroups in Australia are B, C, W and Y. Since the introduction of a serogroup C vaccine in 2003 most cases in NSW have been caused by serogroup B. However, since 2015 there has been an increase in cases caused by serogroup W in NSW and other jurisdictions.

To date in 2016 in NSW, 20 cases of meningococcal disease have been caused by serogroup B and 23 by serogroup W. Other cases in 2016 have been caused by serogroup Y (11), C (1) or a non-groupable strain (5); serogroup results are pending for three cases.

Vaccination against meningococcal C infection is included in the national immunisation schedule with vaccination due at 12 months of age. Combined vaccines against the A, C, Y and W serogroups are generally only recommended for travellers to countries where these are more common and for some people with certain high risk conditions that predispose them to developing IMD such as people without a spleen.

A vaccine against some serogroup B strains has recently become available in Australia; it is recommended for young children and adolescents but is not part of the National Immunisation Program.

Follow the links for more information on meningococcal disease and vaccination.

Q fever

During 2016, 162 cases have been notified compared to 189 in the same period last year. The greatest number have come from Western NSW LHD (32.1%), followed by Hunter New England

(23.5%) and Northern NSW (11.7%). Cases were also reported in metropolitan Sydney (10.5%), Mid North Coast (6.8%), Murrumbidgee (5.0%), Southern (5.0%) and Far West NSW (3.7%).

Q fever is caused by the bacterium *Coxiella burnetii*. The main carriers of the disease are farm animals such as cattle, sheep and goats, but other animals such as kangaroos, bandicoots, and domestic pets (e.g. dogs and cats) can also be infected. People usually get infected by breathing in infected aerosols or dust when working with infected animals, animal tissues or discharges (blood, placenta, urine, faeces or milk) or animal products (e.g. wool, hides). Infection can also occur through skin injuries (e.g. cuts with contaminated knives), and rarely through ticks, consuming unpasteurised milk or milk products, or (very rarely) from person-to-person. Individuals working in industries with regular exposure to animals, animal products or environments where animals are kept are at increased risk of contracting Q fever.

Many infected people (approximately 60%) have no or few symptoms. Those who become sick develop a flu-like illness about 2-3 weeks after exposure, which may include high fevers and chills, severe sweats, severe headaches (often behind the eyes), muscle and joint pains and extreme fatigue (tiredness). Most people make a full recovery and become immune to repeat infections. Occasionally (2% of acute cases), people develop chronic infections which affect the heart (endocarditis) or the liver (hepatitis).

About 10–20% of acute cases go on develop chronic fatigue (post-Q fever fatigue syndrome), which can occur up to two years after the initial infection and last for many years. Certain conditions (e.g. pregnancy, immunosuppression, pre-existing heart valve lesions, vascular abnormalities or prostheses) may predispose individuals to chronic infections.

A vaccine is available to protect people against infection. Vaccination is recommended for all people who are working in, or intend to work in, a high-risk occupation such as in an abattoir, veterinary care or farming. Pre-vaccination screening with both a blood test and a skin test is required before Q fever vaccination. Workplaces at risk of Q fever are required to implement risk control measures, including pre-screening and vaccination, and other safe work practices for all workers, contractors and others who may be exposed.

Follow the links for more information on Q fever, notifications data, vaccine recommendations and workplace requirements.

Summary of notifiable conditions activity in NSW

The following table (Table 1) summarises notifiable conditions activity over the reporting period.

Table 1. NSW Notifiable conditions from 3 to 9 October 2016, by date received *

		Weekly		Year to date			Full Year	
		This week	Last week	2016	2015	2014	2015	2014
Enteric Diseases	Cryptosporidiosis	4	11	857	701	316	1038	429
	Giardiasis	42	36	2847	2669	2271	3415	2942
	Rotavirus	22	18	392	576	440	1036	714
	Salmonellosis	48	50	3658	3147	3334	4042	4273
	Shigellosis	8	3	238	134	167	172	212
Respiratory Diseases	Influenza	649	1197	32161	28297	19831	30306	20888
	Legionellosis	1	3	102	80	52	96	72
	Tuberculosis	2	6	352	331	359	445	475
Sexually Transmissible Infections	Chlamydia	405	464	19930	17120	17777	22548	22899
	Gonorrhoea	107	99	5316	4165	3748	5400	4876
Vaccine Preventable Diseases	Adverse Event Following Immunisation	4	2	197	142	211	186	258
	Meningococcal Disease	1	5	61	36	24	46	37
	Mumps	2	3	40	43	67	64	82
	Pertussis	158	202	8243	6873	1746	12083	3051
	Pneumococcal Disease (Invasive)	9	20	419	393	395	495	511
Vector Borne Diseases	Dengue	5	0	355	254	333	343	378
	Malaria	2	0	41	33	76	47	87
	Ross River	3	2	374	1459	475	1638	673
Zoonotic Diseases	Q fever	2	6	162	189	142	265	190

*** Notes on Table 1: NSW Notifiable Conditions activity**

- Data cells represent the number of notifiable disease case reports received by NSW public health units and recorded on the NSW Notifiable Conditions Information Management System (NCIMS) in the relevant period.
- Data cells in the 'Adverse Event Following Immunisation' category refer to suspected cases only. These reports are referred to the Therapeutic Goods Administration (TGA) for assessment. Data on adverse events following immunisation is available online from the TGA Database of Adverse Event Notifications.
- Only conditions for which at least one case report was received in the current reporting week appear in the table. HIV and other blood-borne virus case reports are not included here but are available from the Infectious Diseases Data webpage.